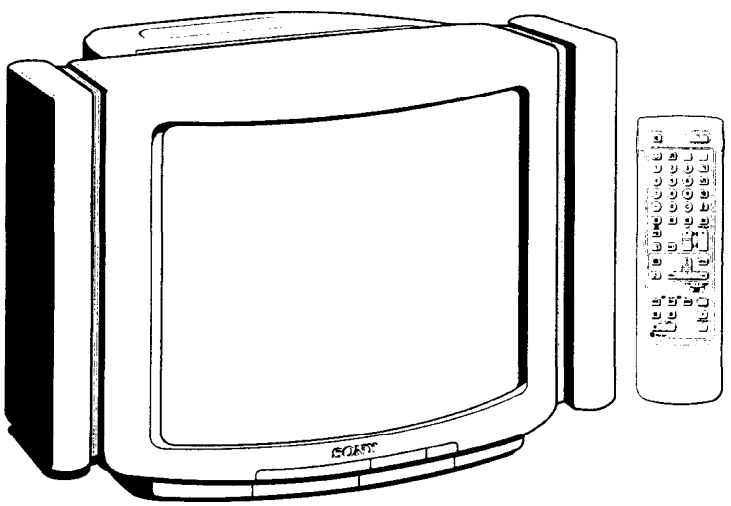
ODEL	COMMANDER	DEST.	CHASSIS NO.
KV-E2961A	RM-831	Italian	SCC-G76A-A
KV-E2961B	RM-831	French	SCC-G75A-A
KV-E2961D	RM-831	AEP	SCC-G72A-A

MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-E2963E	RM-831	Spanish	SCC-G78A-A
KV-E2961K	RM-831	OIRT	SCC-G95B-A



Super **Trinitron**

MICROFILM

TRINITRON® COLOUR TV

SONY®

Specifications

ITEM MODEL	Television system	Stereo system	Channel coverage	Color system
Italian	B/G/H,D/K	GERMAN Stereo	ITALIA VHF:A-H2 (C) UHF:21-69 PAL B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10,U1-U10 D/K VHF:R01-R12 UHF:R21-R69	PAL,SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
French	B/G/H,D/K L, I	GERMAN Stereo	L VHF:F02-F10 UHF:F21-F69 CABLE:B-Q B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10,U1-U10 ITALIA VHF:A-H2 (C) UHF:21-69 D/K VHF:R01-R12 UHF:R21-R69	PAL,SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
AEP	B/G/H,D/K	GERMAN Stereo	PAL B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10,U1-U10 ITALIA VHA:A-H12 (C) UHF:21-69 D/K VHF:R01-R12 UHF:R21-R69	PAL,SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
Spanish	B/G/H,D/K	GERMAN/NICAM Stereo	PAL B/G VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10,U1-U10 ITALIA VHF:A-H2 (C) UHF:21-69 D/K VHF:R01-R12 UHF:R21-R69	PAL,SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
OIRT	B/G/H, D/K	GERMAN Stereo	B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 D/K VHF;R1-R12 UHF:R21-R60	PAL, SECAM NTSC 4.43, NTSC 3.58 (VIDEO IN)

MODEL	Italian	French	AEP	Spanish	OIRT
Power consumption	140 W	143 Wh	155 W	155 W	155 W

Picture tube — Super Trinitron
Approx. 72 cm (29 inches)
(Approx. 68 cm picture measured diagonally)
110° -deflection

[REAR]
-⊡ 1 21-pin Euro connector
(CENELEC standard)
Inputs for audio and video signals
- inputs for RGB
- outputs of TV video and audio signals

⊖ 2/-⊡ 2 21-pin Euro connector
- inputs for audio and video signals
- inputs for S video
- outputs for audio and video signals
(selectable)

⊖ 4/-⊡ 4 21-pin Euro connector
- inputs for audio and video signals
- inputs for S video
- outputs for audio and video signals
(monitor out)

-⊡ 2, -⊡ 4 S video inputs
- 4 pin DIN

-⊖ Audio inputs (L, R) -phono jacks
⊡⊖ S video output - 4 pin DIN
⊖ Audio outputs - phono jacks
⊖ Audio outputs (variable) - phono jacks
External speaker terminals: 2 pin
Woofer terminal : 2-pin

[FRONT]
⊖ 3 Video input-phono jack
⊖ Audio input-phono jacks
-⊡ 3 S video input 4-pin DIN
∩ Headphone jack: Stereo minijack

Sound output	2x15W Side Speakers (RMS) 25W Woofer (RMS) 2x35W Side Speaker (Music)
Dimensions incl.speakers	Approx. 802x624x525 mm
Weight	Approx. 55.0 kg
Supplied accessories	RM-831 Remote Commander (1) RM-860 Roller Commander (1) IEC designation R6 batteries (2)
Other features	NICAM, FASTEXT Programmable commander NICAM/GERMAN FASTTEXT

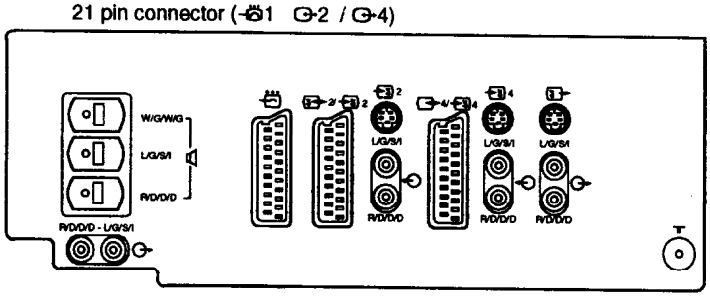
[RM-831]

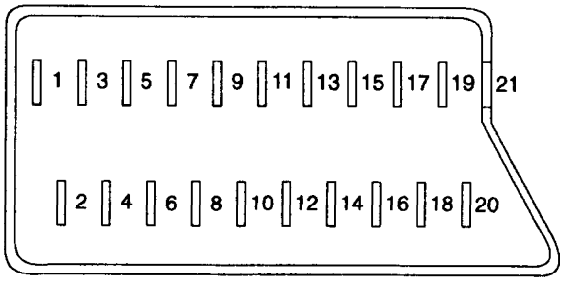
Remote control system	infrared control
Power requirements	3V dc 2 batteries IEC designation R6 (size AA)
Dimentions	Approx. 65x222x21 mm (w/h/d)
Weight	Approx. 157g (Not including Batteries)

Design and specifications are subject to change without notice.

Model name / Item	KV-E2961A	KV-E2961B	KV-E2961D	KV-E2963E	KV-E2961K
Pal Comb	ON	ON	ON	ON	ON
PiP	ON	ON	ON	ON	ON
RGB Priority	ON	ON	OFF	OFF	OFF
Woofer Box	ON	ON	ON	ON	ON
Scart 1	ON	ON	ON	ON	ON
Scart 2	ON	ON	ON	ON	ON
Front in (3)	ON	ON	ON	ON	ON
Scart 4	ON	ON	ON	ON	ON
Dyn. Convergence	OFF	OFF	OFF	OFF	OFF
Projector	OFF	OFF	OFF	OFF	OFF
AKB in 16:9 mode	ON	ON	ON	ON	ON
Norm B/G	ON	ON	ON	ON	OFF
Norm I	OFF	ON	OFF	OFF	ON
Norm D/K	ON	ON	ON	ON	OFF
Norm AUS	OFF	OFF	OFF	OFF	OFF
Norm L	OFF	ON	OFF	OFF	OFF
Norm SAT	OFF	OFF	OFF	OFF	OFF
Norm M	OFF	OFF	OFF	OFF	OFF
Language Preset	Italiano	Francais	Deutsch	None	English

21 pin connector (1 2 / 4)





Pin No	1	2	Signal	Signal level
1	○	○	Audio output B (right)	Standard level: 0.5Vrms Output impedance:less than 1kohm*
2	○	○	Audio input B (right)	Standard level:0.5Vrms Input impedance:More than 10kohms*
3	○	○	Audio output A (left)	Standard level:0.5Vrms Output impedance:less than 1kohm*
4	○	○	Ground (audio)	
5	○	○	Ground (blue)	
6	○	○	Audio input A (left)	Standard level:0.5Vrms Input impedance:More than 10kohms*
7	○	●	Blue input	0.7V±3dB, 75ohms, positive
8	○	○	Function select (AV control)	High state (9.5—12V):Part mode Low state (0—2V):TV mode Input impedance:More than 10kohms Input capacitance:Less than 2nF
9	○	○	Ground (green)	
10	○	○	Open	
11	○	●	Green	Green signal:0.7V±3dB. 75ohms, positive
12	○	○	Open	
13	○	○	Ground(red)	
14	○	○	Ground (blanking)	
15	○	—	Red input	0.7V±3dB, 75ohms, positive
	—	○	(S signal) croma input	0.3V±3dB, 75ohms, positive
16	○	●	Blanking input (Ys signal)	High state (1—3V) Low state (0—0.4V) Input impedance:75ohms
17	○	○	Ground (video output)	
18	○	○	Ground (video input)	
19	○	○	Video output	1V±3dB, 75ohms, positive Sync:0.3V(–3, +10dB)
20	○	—	Video input	1V±3dB, 75ohms, positive Sync:0.3V(–3, +10dB)
	—	○	Video Input/Y (S signal)	1V±3dB, 75ohms, positive Sync:0.3V(–3, +10dB)
21	○	○	Common ground (plug, shield)	

○ connected ● unconnected (open) * At 20 Hz—20kHz

CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

WARNING !!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.

THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND, IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

ATTENTION !!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÁSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE.

LE CHÁSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÈS PAR UNE TRAME ET PAR UNE MARQUE ⚠ SUR LES VUES EXPLOSÉES ET LES LISTES DE PIECES SONT D'UNE IMPORTANCE CRITIQUE PUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY.

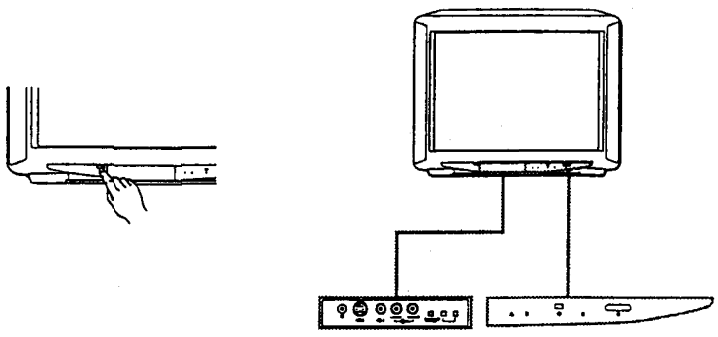
Overview

SECTION 1
GENERAL

The operating instructions mentioned here are partical abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remein as in the manual.

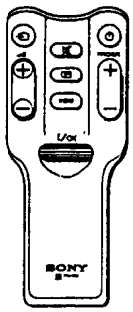
This section briefly describes the buttons and controls on the TV set and on the Remote Commander. For more information, refer to the pages given next to each description.

TV set-front

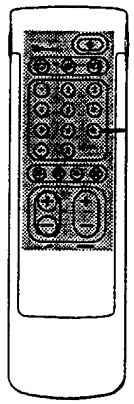


Symbol	Name	Refer to page
h	Main power switch	13
i	Standby indicator	13
A-g -B	Stereo A/B indicators	15
J	Headphones jack	23
y 3, z 3, p 3,	Input jacks (S video/video/audio)	23
P→1 →z	Function selector (Programme/volume/input)	13
–/+	Adjustment buttons for function selector	13

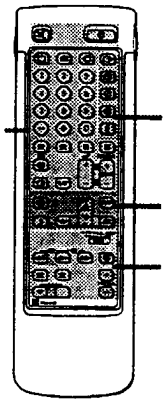
Roller Commander RM-860



Remote commander RM-831



Simple side



Full-Function side

Note
The SAT button does not operate with this TV.

TV/Teletext operation

Symbol	Name	Refer to page
u	Muting on/off button	14
i	Standby button	13
x	TV power on/TV mode selector button	13
Á	Teletext button	14
z	Input mode selector	14
h	Output mode selector	24
1,2,3,4,5,6, 7,8,9 and 0	Number buttons	13
–/--	Double-digit entering button	13
C	Direct channel entering button	12
l +/-	Volume control button	13
PROGR+/-	Programme selectors	13
q r	Teletext page access buttons	20
n	Picture adjustment button	15
ó	Sound adjustment button	15
G	On-screen display button	14
á	Teletext hold button	20
ø	Time display button	14
■■■■	Fastext buttons	20

PIP (Picture-in-Picture) operation

Symbol	Name	Refer to page
ó	PIP on/off button	18
Ì	PIP source selector	18
n	Swap button	18
m	PIP position changing button	18

Menu operation

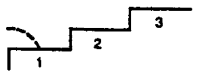
Symbol	Name	Refer to page
MENU	Menu on/off button	7
o+/s–	Select buttons	7
OK	OK (confirming) button	7
←	Back button	7
y/OK	Roller Commander: Roller to select/confirm menu functions	7

Video operation

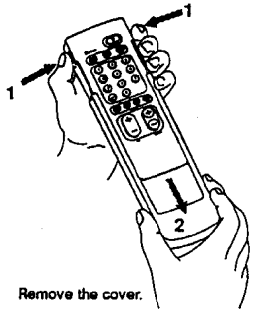
Symbol	Name	Refer to page
VTR 1/2/3, MDP	Video equipment selector	25
q q ø ø ø ■ II ● i PROGR +/-	Video equipment operation buttons	25

Getting Started

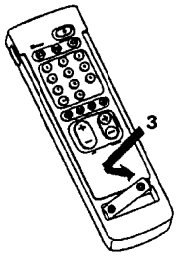
Step 1 – Preparation



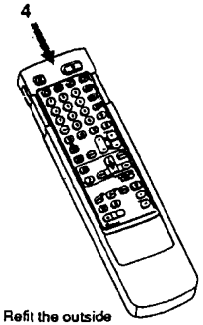
Insert the batteries into the Remote Commanders



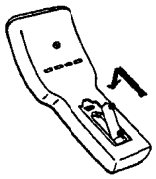
Remove the cover.



Check the correct polarities.

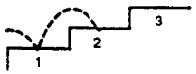


Refit the outside cover making sure that the Full-Function side is visible to use the menu in Step 3.

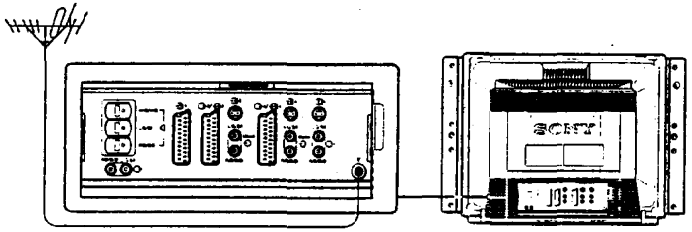


Check the correct polarities.

Step 2 – Connection

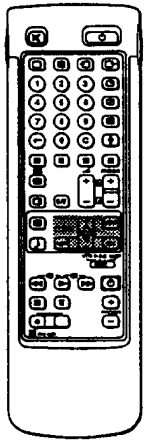


Connect the aerial



Fit an IEC aerial connector attached to 75-ohm coaxial cable (not supplied) to the Y socket at the rear of the TV.

Step 3 – Tuning in to TV Stations



Once you have set up the TV, you can choose the language of the menu. Then you should preset the channels (up to 100 channels) by choosing either the automatic or manual method.

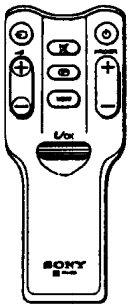
The automatic method is easier if you want to preset all receivable channels at once. Use the manual method if you only have a few channels and want to preset channels one by one. The manual method is also convenient for allocating programme numbers to various video input sources.

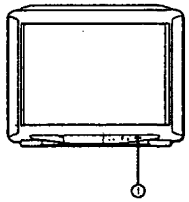
Before you begin

- Check that the Full-Function side of the Remote Commander is visible.
- Locate Menu operation buttons on the Remote Commander. They are shaded in the illustration at the left.

Easy Menu operation using the Roller Commander

In addition to your double-sided Remote Commander your TV set is supplied with an extra Remote commander. This Roller Commander works with a roller for convenient, fast-access operation of the Menu functions. Move the roller upwards to move the cursor upwards, move the roller downwards to move the cursor downwards, press the roller to confirm a selection. The other buttons on this commander have the same function as the respective buttons on the double-sided Remote Commander.





To go back to main menu
Keep pressing ←.

To go back to the normal TV picture
Press MENU.

Note on the DEMO function
If you choose »Demo« on the main menu, you can see a sequential demonstration on the menu functions.
Press MENU to stop the function.

❶ Choose a language

1 Depress h on the TV.
The TV will switch on. If the standby indicator on the TV is lit, press x or a number button on the Remote Commander.
2 Press the MENU button.
The LANGUAGE menu appears. (See Fig. 1.)

MENU

3 Select the language you want with o + or s – and press OK.

Fig. 1.

❷ Display the Menu

Press the ← button.
The main menu appears. (See Fig. 2.)

Now, choose one of the following methods
»Preset Channels Automatically«
or
»Preset Channels Manually«.

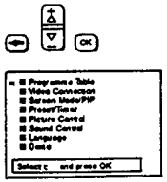


Fig. 2.

❸ Preset channels automatically

With this method, you can preset all receivable channels at once.

To stop automatic channel presetting
Press ← on the Remote Commander.

Notes
- After presetting the channels automatically, you can check which channels are stored on which programme positions. For details, see »Using the Programme Table« on page 17.
- You can sort the programme positions to have them appear on screen in the order you like. For details, see »Sorting Programme Positions« on page 10.

Note
Programme names are automatically taken from Teletext if available. If not, please refer to page 11 »Captioning a Station name« for more information.

1 Select »Preset/Timer« with ○ + or s – and press OK.
The PRESET/TIMER menu appears. (See Fig. 3.)

2 Select »Auto Programme« with ○ + or s – and press OK.
The AUTO PROGRAMME menu appears. (See Fig. 4.)

3 Press OK repeatedly until the first element of the »PROG« number is highlighted.

4 Select the programme (number button) from which you want to start presetting. Select the first element of the double-digit number with ○ + or s – or the number buttons (e.g. For »04«, select »0« here) and press OK.
The second element of »PROG« will be highlighted.

5 Select the second element of the double-digit number with ○ + or s – or the number buttons (e.g. For »04«, select »4« here) (See Fig. 5.) and press OK.

6 Press OK. The automatic channel presetting starts.

When presetting is finished, the preset menu reappears. All available channels are now stored on successive number buttons.

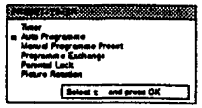


Fig. 3.

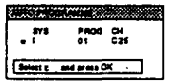


Fig. 4.

Fig. 5.

❸ Preset channels manually

Use this method if there are only a few channels in your area to preset or if you want to preset channels one by one. You may also allocate programme numbers to various video input sources.

If you have made a mistake
Press ← to go back to the previous position.
To go back to main menu
Keep pressing ←.
To go back to the normal TV picture
Press MENU.

1 Select »Preset/Timer« with ○ + or s – and press OK.
The PRESET/TIMER menu appears. (See Fig. 6.)

2 Select »Manual Programme Preset« with ○ + or s – and press OK.
The MANUAL PROGRAMME PRESET menu appears.
(See Fig. 7.)

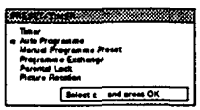


Fig. 6.

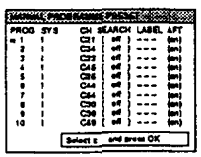


Fig. 7.

3 Using ○ + or s –, select the programme position (number button) to which you want to preset a channel, and press OK.

4 Select if necessary, a video input source (EXT) with ○ + or s –.

5 Then press OK. The CH position will be highlighted.
(See Fig. 8.)

6 Using ○ + or s –, select C (to preset a regular channel) or F (to tune in by frequency) and press OK.
The first element of the »CH« number will be highlighted.
If you have selected EXT in step 4, select the video input source with ○ + or s –. (See Fig. 9.)

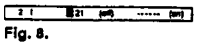


Fig. 8.

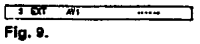


Fig. 9.

There are two ways to preset channels. If you know the channel number, go to step »7-Manual«,

or

if you don't know the channel number, go to step »7-Search«.

To tune in a channel by frequency
After selecting F in step 6, enter three digits using the number buttons.

7 ***Manual***

-a Select the first element of the »CH« number with ○ + or s – or the number buttons and press OK.
The second element of the »CH« number will be highlighted.

-b Select the second element of the number with ○ + or s – or the number buttons.
The selected number appears. (See Fig. 10.)

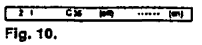


Fig. 10.

-c Press OK.
The »SEARCH« position is highlighted and the selected channel is now stored. (See Fig. 11.)

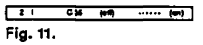


Fig. 11.

-d Press OK until the cursor appears by the next programme position.

-e Repeat steps 3 to 7 to preset other channels.

If you have made a mistake
Press ← to go back to the previous position.
To go back to main menu
Keep pressing ←.
To go back to the normal TV picture
Press MENU.

7 ***Search***

-a Press OK repeatedly until the colour of the SEARCH position changes.

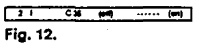


Fig. 12.

-b Start searching for the channel with ○ + (up) or s – (down).
The CH position changes colour. (See Fig. 12.)
The CH number starts counting up or downwards. When a channel is found, it stops. (See Fig. 13.)

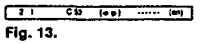
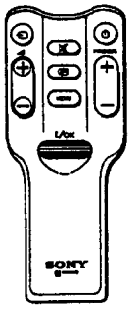


Fig. 13.

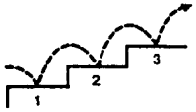
-c Press OK if you want to store this channel. If not, press ○ + or s – to continue channel searching.

-d Press OK until the cursor appears by the next programme position.

-e Repeat steps 3 to 7 to preset other channels.



Additional Presetting Functions

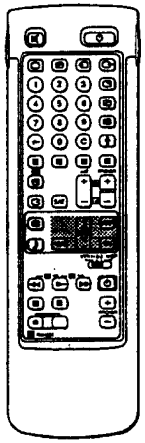


This section shows you additional presetting functions such as sorting or skipping programme positions, captioning a station name, manual fine-tuning, and using the parental lock.

Before you begin

- Check that the Full Function side of the Remote Commander is visible.
- Locate the Menu operation buttons.

PROGRAMME SORTING



Sorting Programme Positions

With this function, you can sort the programme positions to a preferable order.

1 Press MENU to display the main menu.

2 Select »Preset/Timer« with ○ + or s – and press OK.
The PRESET/TIMER menu appears.

3 Select »Programme Sorting« with ○ + or s – and press OK.
The PROGRAMME SORTING menu appears. (See Fig. 14.)

4 Using ○ + or s –, select the programme position which you want to move to another and press OK.
The colour of the selected position changes. (See Fig. 15.)

5 Using ○ + or s –, select the programme position to which you want to move the channel of the programme position selected in step 4 and press OK. Now the programme positions have been sorted. (See Fig. 16.)

6 Repeat steps 4 and 5 to sort other programme positions.

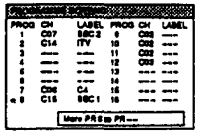


Fig. 14.

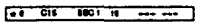


Fig. 15.

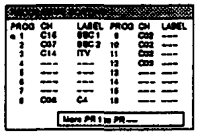


Fig. 16.

PICTURE ROTATION

For higher programme positions The display scrolls automatically.

If you have made a mistake
Press ← to go back to the previous position.

To go back to main menu
Keep pressing ← .

To go back to the normal TV picture
Press MENU.

How to adjust the Picture Rotation

If due to the earth magnetism the picture »slants«, you can use the function »Picture Rotation« to readjust the picture.

1 Press MENU to display the main menu.

2 Select »Preset/Timer« with ○ + or s – and press OK.
The PRESET/TIMER menu appears.

3 Select »Picture Rotation« with ○ + or s – and press OK.
The PICTURE ROTATION menu appears. (See Fig. 17.)

4 Press OK. Adjust the picture rotation with ○ + or s – until you have an upright picture. As you press the cursor buttons, the range changes from –2 to +2.

5 Press OK to store the adjustment.

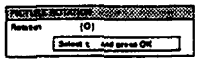


Fig. 17.

Skipping Programme Positions

You can skip unused programme positions when selecting programmes with the PROGR +/– buttons. However, the skipped programmes may still be called up when you use the number buttons.

1 Press MENU to display the main menu.

2 Select »Preset/Timer« with ○ + or s – and press OK.
The PRESET/TIMER menu appears.

3 Select »Manual Programme Preset« with ○ + or s – and press OK.
The MANUAL PROGRAMME PRESET menu appears.
(See Fig. 18.)

4 Using ○ + or s –, select the programme position which you want to skip and press OK.
The »SYS« position changes colour.

5 Press ○ + or s – until »– – – –« appears in the SYSTEM position.
(See Fig. 19.)

6 Press OK. (See Fig. 20.)
When you select programmes using the PROGR +/– buttons, the programme position will be skipped.

7 Repeat steps 4 to 6 to skip other programme positions.

PROGR
+
–

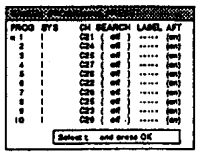


Fig. 18.

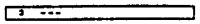


Fig. 19.

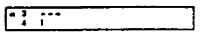


Fig. 20.

MANUAL PROGRAMME PRESET

If you have made a mistake
Press ← to go back to the previous position.

To go back to main menu
Keep pressing ← .

To go back to the normal TV picture
Press MENU.

Captioning a Station Name

Programme names are usually automatically taken from Teletext if available. You can also »name« a channel or an input video source using up to five characters (letters or numbers) to be displayed on the TV screen (e.g. BBC1). Using this function, you can easily identify which channel or video source you are watching.

1 Press MENU to display the main menu.

2 Select »Preset« with ○ + or s – and press OK.
The PRESET menu appears.

3 Select »Manual Programme Preset« with ○ + or s – and press OK.
The MANUAL PROGRAMME PRESET menu appears.
(See Fig. 21.)

4 Using ○ + or s –, select the programme position you want to caption and press OK repeatedly until the first element of the LABEL position is highlighted.

5 Select a letter or number with ○ + or s – and press OK.
The next element will be highlighted.
Select other characters in the same way. If you want to leave an element blank, select – and press OK. (See Fig. 22.)

6 After selecting all the characters, press OK repeatedly until the cursor appears by the next programme position (at the left margin). Now the caption you chose is stored. (See Fig. 23.)

7 Repeat steps 5 and 6 to caption names for other channels.

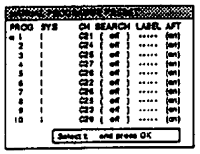


Fig. 21.

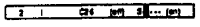


Fig. 22.

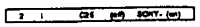


Fig. 23.

Manual Fine-Tuning

Normally, the AFT (automatic fine-tuning) is already operating. However, if the picture is distorted, you can use the manual fine tuning function to obtain better picture reception.

1 Press MENU to display the main menu.

2 Select »Preset/Timer« with o + or s – and press OK.
The PRESET/TIMER menu appears.

3 Select »Manual Programme Preset« with o + or s – and press OK.
The MANUAL PROGRAMME PRESET menu appears.
(See Fig. 24.)

4 Using o + or s –, select the programme position corresponding to the channel which you want to manually fine-tune, and press OK repeatedly until the AFT position changes colour.

To reactivate AFT (automatic fine tuning)
Repeat from the beginning and select »ON« in step 5.

5 Fine-tune the channel with o + or s – so that you get the best TV reception. As you press the cursor buttons, the frequency changes from – 15 to + 15. (See Fig. 25.)

6 After fine tuning, press OK.
The cursor appears beside the next programme position (at the left margin). (See Fig. 26.) Now the fine-tuned level is stored.

7 Repeat steps 4 to 6 to fine-tune other channels.

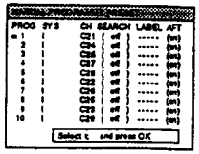


Fig. 24.

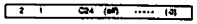


Fig. 25.

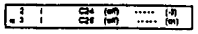


Fig. 26.

Parental Lock

You can prevent undesirable broadcasts from appearing on the screen. We suggest you use this function to prevent children from watching programmes which you consider unsuitable.

1 Press MENU to display the main menu.

2 Select »Preset« with o + or s – and press OK.
The PRESET menu appears.

3 Select »Parental Lock« with o + or s – and press OK.
The PARENTAL LOCK menu appears. (See Fig. 27.)

4 Using o + or s –, select the programme position you want to block and press OK.
The CH and LABEL change colour indicating that this programme is now blocked. (See Fig. 28.)

5 Repeat step 4 to block other programme positions.

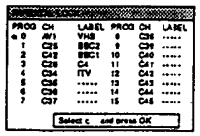


Fig. 27.

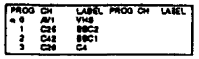


Fig. 28.

If you try to select a programme that has been blocked
The message »LOCKED« appears on the blank TV screen.

Cancelling blocking

1 On the PARENTAL LOCK menu, select the programme position you want to unblock with o + or s –.

2 Press OK.
The CH and LABEL change colour to normal colour indicating that the blocking has been cancelled.

Tuning in a Channel Temporarily

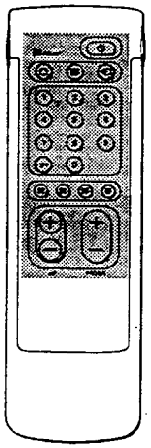
You can tune in a channel temporarily, even when it has not been preset. Use the buttons on the Full-Function side of the Remote Commander.

1 Press C on the Remote Commander.
The indication »C« appears on the screen.

2 Enter the double-digit channel number using the number buttons (e.g. for channel 4, first press 0, then 4).
The channel appears.
However, the channel will not be stored.

Operating Instructions

Watching the TV



If no picture appears when you depress h on the TV
and if the standby indicator on the TV is lit, the TV is in standby mode. Press x or one of the number buttons to switch it on.

This section explains the basic functions you use while watching TV. Most of the operations can be done using the simple side of the Remote Commander.

Switching the TV on and off

Switching on

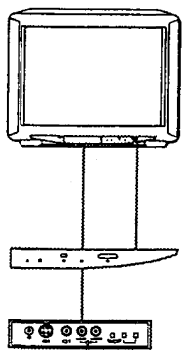
Depress h on the TV.

Switching off temporarily

Press i on the Remote Commander.
The TV enters standby mode and the standby indicator on the front of the TV lights up.
To switch on again
Press x , PROGR +/–, or one of the number buttons on the Remote Commander.

Switching off completely

Depress h on the TV.



Selecting TV Programmes

Press PROGR +/- or press number buttons.

To select a double-digit number

Press -/- -, then the numbers.
For example, if you want to choose 23, press -/- -, 2 and 3.

Adjusting the Volume

Press l +/–.

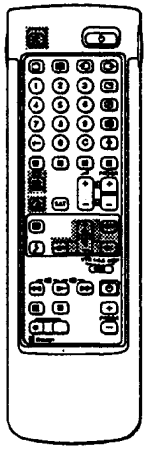
Operating the TV Using the Buttons on the TV

With the buttons on the TV, you can select programmes, adjust the volume, and select video input sources.

- Press P→l →z button repeatedly until the programme number, l (for volume), or z (for video input picture) appears. Then adjust with the –/+ buttons.
- Press –/+ buttons to switch on the TV from the standby mode.
- Press –/+ simultaneously to reset picture and sound controls to the factory preset level (RESET function).

For details of the teletext operation, refer to page 20.

For details of the video input picture, refer to page 24.



To make the Programme Table disappear
Press MENU.

Watching Teletext or Video Input

Watching teletext

- Press Ä to view the teletext.
- Press three number buttons to select a page.
- Press one of the coloured buttons for fastext operation.
- Press q (PAGE +) or r (PAGE –) for the next or preceding page.
- To go back to the normal TV picture, press x .

Watching a video input picture

Press z repeatedly until the desired video input appears. To go back to the normal TV picture, press x .

More Convenient Functions

Use the Full-Function side of the Remote Commander.

Displaying the on screen indications

- Press G once to display all the indications. They will disappear after some seconds.
  Press G twice to have the programme number and label stay on screen. Press twice again to make indications disappear.

Muting the sound

- Press u .
  To resume normal sound, press u again.

Displaying the time

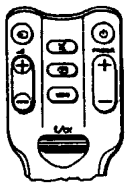
- Press x . This function is available only when teletext is broadcast.
  To make the time display disappear, press x again.

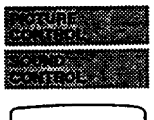
Displaying of the Programme Table

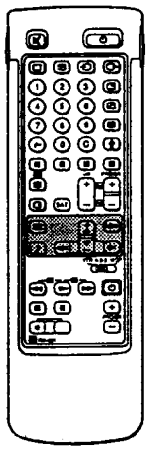
Press OK. A Programme Table will be displayed on the right side of the TV screen (See. Fig. 29.)

Selecting of TV programmes
Press PROGR +/– or select the desired programme position using o + or s – and press OK.

Fig. 29.







If you have made a mistake
Press ← to go back to the previous position.

To go back to the main menu
Keep pressing ← .

To go back to the normal TV picture
Press MENU.

Note:
HUE is only available for NTSC colour system and RESOLUTION does not work for SECAM colour system.

Note on LINE OUT
The audio level and the dual sound mode output from the Ł jack on the rear correspond to the Headphone VOLUME and DUAL SOUND settings.

When watching video input picture
You can select DUAL SOUND to change the sound.

Adjusting and Setting the TV Using the Menu

Adjusting the Picture and Sound

Although the picture and sound are adjusted at the factory, you can adjust them to suit your own taste. In addition, you can set the resolution to obtain a higher quality picture or reduce the picture noise. You can also select dual sound (bilingual) programmes when available, adjust the sound for listening with the headphones (J) or individually adjust and store the volume level of each channel (Volume offset). Also you have the possibility to adjust the sound to your individual taste using the Graphic Equalizer and special Sound effects.

1 Press n (for picture) or Ô (for sound) on the Remote Commander.
  or
  Press MENU and select »Picture Control« or »Sound Control«, then press OK.
  The PICTURE CONTROL or SOUND CONTROL menu appears. (See Fig. 29 or Fig. 30.)

2 Using o + or s –; select the item you want to adjust and press OK. The selected item changes colour. (See Fig. 31.)

3 Adjust the setting with o + or s – and press OK.
  The cursor appears beside the next item (at the left margin). (See Fig. 32.)
  For the effect of each control, see the table below.

4 Repeat steps 2 and 3 to adjust other items.

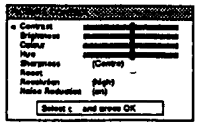


Fig. 30.

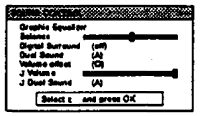


Fig. 31.

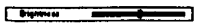


Fig. 32.

Fig. 33.

Effect of each control

PICTURE CONTROL	Effect	
Contrast	Less —+— More	
Brightness	Darker —+— Brighter	
Colour	Less —+— More	
Hue	Greenish —+— Reddish	
Sharpness	Min. – Centre – Max.	
Reset	Resets picture to the factory preset levels	
Resolution	off: Normal	High: Obtain a higher picture quality
Noise Reduction	off: Normal	on: Reduction of picture noise in case of weak signals

SOUND CONTROL	Effect	
Graphic Equalizer	(See page 16 for more information)	
Balance	More left —+— More right	
Digital Surround	off: Normal	Choice between special sound effects: Dome, Hall, Arena, Simulated (gives width to a monaural source)
Dual Sound	A: left channel	B: right channel stereo mono The selected mode of The A-g -B indicator on the TV lights up (for NICAM broadcasts see next page)
Volume offset	– 4 Less 0 More + 4	
Headphones:		
J Volume	Less —+— More	
J Dual Sound	A: left channel	B: right channel stereo mono

Note:
The modifications made in »User« will be stored. All other settings are reset to the factory-set level when you change to another mode.

Graphic Equalizer

Using this function you can individually adjust the sound by cutting and boosting selected frequencies. You can also select between the following modes:
Flat → Pop → Rock → Jazz → Vocal → User

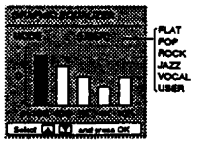


Fig. 34.

1. Select »Sound control« in the Main Menu, then select »Graphic equalizer« using o + or s – and press OK.
2. Press OK. The colour of »Mode« changes. (See Fig. 34.) Select the desired mode with o + or s –, then press OK.
3. If you want to modify a mode, select the desired bar of a frequency band using o + or s – and press OK. The selected bar changes colour. Using o + or s – adjust the level of frequency and press OK. In this way you can adjust all 5 graphic bars.
4. Press MENU to return to the normal TV mode.

*Selecting Nicam Broadcasts**

This Sony TV has been designed to select Nicam broadcasts when available. Whenever a Nicam broadcast is received, »NICAM« appears briefly on the screen. When the Nicam programme ends, or you switch channels to one without Nicam, the A-g -B indicators, on the TV will switch off.

Nicam programmes can be broadcast in two ways. You may select the sound you want to hear in either of these by first following the instructions explained on page 15.

Service Being Broadcast	Action	Effect	Indication on the TV A-g -B
Stereo	Press	Stereo Nicam (Mono 2-Channel)	☞ ☞
	o + or s –	mono	▭ ▭
Press o + or s – again to return to stereo Nicam (mono 2-channel)			
Bilingual	press	Channel A Nicam	☞ ▭
	o + or s –	Channel B Nicam	▭ ☞
		mono	▭ ▭
Press o + or s – again to return to channel A Nicam			

* Depending on availability of service.

Using the Programme Table

On this table, you can see which channel is preset to which programme position. You can also select programmes using this table.

From the main menu, select »Programme Table« with o + or s – and press OK.
The PROGRAMME TABLE menu appears. (See Fig. 35.)

To scroll to higher programme numbers, press o + or s –.

To select a programme using this menu
Select the programme number with o + or s – and press OK.
The selected programme appears.

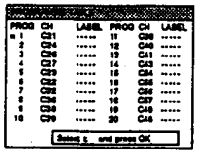


Fig. 35.

To go back to the normal TV picture
Press MENU.

To switch off the timer
Select »OFF« in step 3.

To check the remaining time
Press G .

Using the Sleep Timer

You can select a time period after which the TV automatically switches into standby mode.

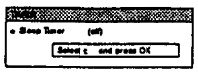


Fig. 36.

1 From the main menu, select »Preset/Timer« with o + or s – and press OK.
The PRESET/TIMER menu appears.

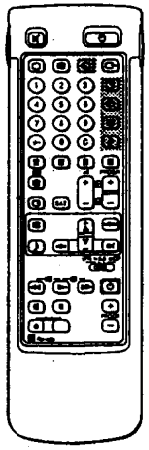
2 Using o + or s – select »Timer« and press OK.
The TIMER menu appears. (See Fig. 36.)

3 Press OK.
The time period option changes colour.

4 Select the time period with o + or s –.
The time period (in minutes) changes as follows:
10 → 20 → 30 → 40 → 50 → 60 → 70 → 80 → 90
↑ OFF ↓

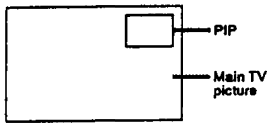
5 After selecting the time period, press OK.
The cursor moves back to the left margin and the timer starts counting.
One minute before the TV switches into standby mode, a message is displayed on the screen.

PIP (Picture-In-Picture)



Note
RGB input source cannot be displayed in PIP.

With this function you can display a »PIP screen« (small picture) within the main TV picture. In this way you can watch or monitor the video output from any connected equipment (for example from a VTR) while watching TV or vice versa. For information about connection of other equipment, refer to page 23.



Switching PIP on and off

Press ó .
The PIP screen will be displayed. The PIP picture will come from the source chosen when the TV was last used.

To switch PIP off
Press ó again.

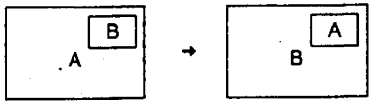
Selecting a PIP source

Press ↑.
The symbol ↑ will be displayed at the bottom, left-hand corner of the screen.
Press z repeatedly until the desired source is indicated (e.g. TV, AV 1, AV 2, YC2, AV 3, YC3, AV 4, YC 4).

Note
If no video source has been connected, the PIP picture will be noisy.

Swapping screens

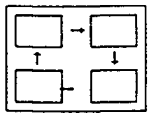
Press n .
The main screen will switch the picture with the PIP screen.

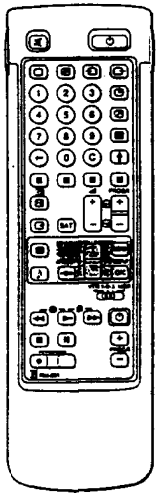


Note
If a TV programme is on the PIP screen and a video source on the main picture, and you want to change channels, first press ↑ and then the programme buttons or PROGR +/-.

Changing the position of the PIP

Press m repeatedly to change the position of the PIP screen within the main screen. There are four different positions available.





Operating Screen Mode / PIP using the Menu

Using the Screen Mode / PIP Menu you have the possibility to change the aspect ratio of the TV display for wide screen effect, operate the PIP mode, scan 9 successive TV channels on the screen (Programme Catching), display 8 successive freeze pictures (Photo mode) or reproduce the main picture image by image (strobe function).

1 Press MENU to display the main menu.

2 Select »Screen mode/PIP« with Δ + or ∇ – and press OK. The SCREEN MODE/PIP menu appears. (See Fig. 37.)

a) **Changing the Format**
Using Δ + or ∇ – select »Screen mode« and press OK. The selected item changes colour. Using Δ + or ∇ – select the desired format (4 : 3 normal ratio or 16 : 9 for wide screen effect) and press OK.

b) **Switching PIP on and off**
Using Δ + or ∇ – select »PIP« and press OK. Using Δ + or ∇ – select »on« to display the PIP screen and »off« to switch it off and press OK.

c) **Changing the position of the PIP**
Using Δ + or ∇ – select »PIP position« and press OK. Using Δ + or ∇ – repeatedly to change the position of the PIP screen and press OK.

MULTI PIP functions

a) **Programme Catching**
Using Δ + or ∇ – select »Programme Catching« and press OK. Now a scan of 9 successive programmes (8 still pictures, 1 live picture where the cursor is positioned) is displayed on the TV screen starting from the programme tuned in. Using Δ + or ∇ – you can move the cursor and update the still pictures. The programme scanning starts again if you select the programme position lower or higher than the 9 displayed ones. (See Fig. 38.)

To select a Programme using the Programme Index
Using Δ + or ∇ – select the desired programme position and press OK. Now the selected programme is displayed and you are back in the normal TV mode.

b) **Photo mode**
Using Δ + or ∇ – select »Photo« and press OK. Now the main picture is displayed as a succession of 8 still pictures and a 9th picture which will be live. (See Fig. 39.) Using Δ + or ∇ – the photo mode starts again. Press OK to return to the normal TV mode.

c) **Strobe mode**
Using Δ + or ∇ – select »Strobe« and press OK. Now the TV picture is displayed image by image, which gives it the effect of slow motion. (See Fig. 40.) Using Δ + or ∇ – select the speed of the motion (3 different speeds are available). Press OK to return to normal TV mode.

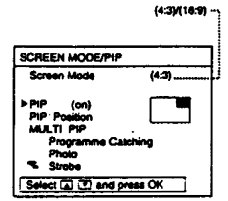


FIG 37.

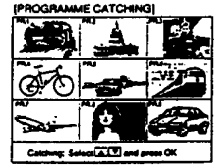


FIG 38.

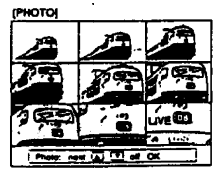


FIG 39.

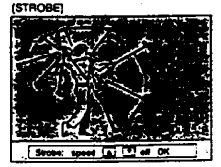
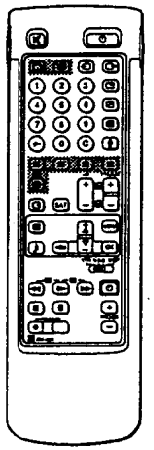


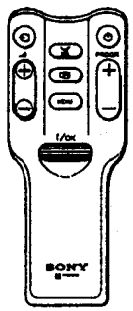
FIG 40.

Teletext



Note
Teletext errors may occur if the broadcasting signals are weak.

With the simple side of the Remote Commander
You can switch teletext on and off, operate Fastext, and directly select page numbers.



Note
Fastext operation is only possible, if the TV station broadcasts Fastext signals.

TV stations broadcast an information service called Teletext via the TV channels. Teletext service allows you to receive various information pages such as weather reports or news at any time you want. For advanced teletext operation, use the buttons on the Full-Function side of the Remote Commander.

Direct Access Functions

Switching Teletext on and off

1 Select the TV channel which carries the teletext broadcast you want to watch.

2 Press Ä to switch on teletext.
A teletext page will be displayed (usually the index page).
If there is no teletext broadcast, »No text available« is displayed on the information line of the screen.

To switch teletext off
Press x .

Selecting a teletext page

With direct page selection
Use the number buttons to input the three digits of the chosen page number.
If you have made a mistake, type in any three digits. Then re-enter the correct page number.

With page-catching

1 Select a teletext page with a page overview (e.g. index page).

2 Press OK. »Page catching« will be displayed on the information line. The last digit if the first displayed page number flashes.

3 Using o + o s –, select the desired page and press OK.
The requested page will appear in a few seconds.
Press Ä to resum.

Accessing next or preceding page
Press q (PAGE +) or r (PAGE -).
The next or preceding page appears.

Superimposing the teletext display on the TV programme

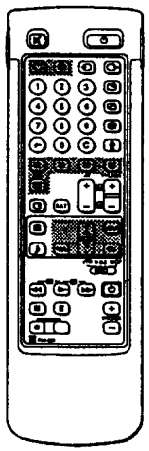
- Press Ä once in teletext mode or twice in TV mode.
- Press Ä again to resume normal teletext reception.

Preventing a teletext page from being updated

- Press á (HOLD). The HOLD symbol »á« is displayed on the information line.
- Press Ä to resume normal teletext reception.

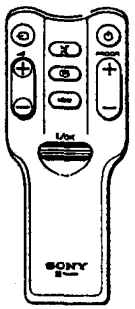
Using Fastext

With Fastext you can access pages with one key stroke.
When a Fastext page is broadcast, a colour-coded menu will appear at the bottom of the screen. The colours of this menu correspond to the red, green, yellow and blue buttons on the Remote Commander.
Press the corresponding coloured button on the Remote Commander which corresponds to the colour-coded menu. The page will be displayed after some seconds.



Note
Some of the features may not be available depending on the Teletext service.

Note:
If you press OK again the right teletext page will appear on the left side of the TV screen.



To cancel the request
Select subpage and press OK.

Using the Teletext Menu

This TV is provided with a menu-guided teletext system. When teletext is switched in, you can use the menu buttons to operate the teletext menu. Select the teletext menu functions in the following way:

1 Press MENU. The menu will be superimposed on the teletext display. (See Fig. 41.)

2 Using o + o s –, select the teletext function you want and press OK. (See Fig. 42.)

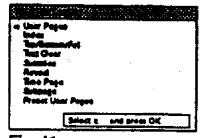


Fig. 41.

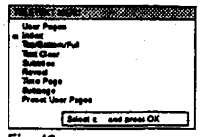


Fig. 42.

USER PAGES/PRESET USER PAGES

See page 22 for information about presetting and operating the user pages.

INDEX

The index will give you an overview of the contents of the teletext and the page numbers.

TOP/BOTTOM/FULL

For convenient reading of a teletext page, you can enlarge the teletext display with the ability to scroll up and down. After having selected the function, an information line TOP/BOTTOM/FULL will be displayed. (See Fig. 43.)

Press o + for »Top« to enlarge the upper half. Keep pressing s – for »Bottom« to enlarge the lower one. Press OK for »Full« to resume the normal size.
Press Ä to resume normal teletext reception.

Fig. 43.

TEXT CLEAR

After having selected the function, you can watch a TV programme while waiting for a requested teletext page to be displayed. (The symbol changes colour) (See Fig. 44.)
Press Ä to view the captured page.

Fig. 44.

SUBTITLES

Your teletext service will inform you if a TV programme is subtitled. After having selected the function the subtitles will be displayed.

REVEAL

Sometimes pages contain concealed information, such as answers to a quiz. The reveal option lets you disclose the information. After having selected the function, an information line »REVEAL ON/OFF« will be displayed. (See Fig. 45.)

Using o + or s –, select ON to reveal the information or OFF to conceal it again.
Press Ä to resume normal teletext reception.

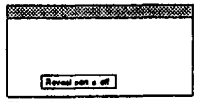


Fig. 45.

TIME PAGE

This feature is not available in the U.K..

SUBPAGE

You may want to select a particular teletext page from several subpages which are rotated automatically. After having selected the function, an information line will be displayed.

To select the desired subpage, enter four digits using PROGR +/– or the number buttons. (e.g. enter 0002 for the second page of a sequence).

User Page Bank System

You can store up to 30 pages in the »Teletext page bank system«. In this way you have quick access to the pages you watch frequently.

Storing pages

There are 5 »banks« (A to E) for 5 teletext stations. In each bank you can store 6 preferred pages (1P to 6P).

1 Press Å (if Teletext is not on already) and MENU to show the TELETEXT MENU display.

2 Select PRESET USER PAGES with o + or s – and press OK.

3 Select the desired bank with o + or s – and press OK. The cursor will go to the first position (P1) of the preferred pages.

4 Input the three digits of your first preferred page with the number buttons. The cursor will go to the second position.

5 Repeat step 4 for the other 5 page numbers you want to preset. If you do not want to preset all 6 page numbers available, press OK without inserting any number.

6 Select »Allocate Bank« with o + or s – and press OK.

7 Select the programme position for which you have preset pages with o + or s – and press OK. (See Fig. 46).

8 Select the desired bank with o + or s – (Banks A to E are available) and press OK.

9 Repeat steps 3 to 8 for the other 4 banks available.

If two broadcasting stations use the same Teletext You can preset one bank to 2 different programme positions.

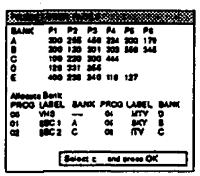


Fig. 46.

Displaying User Pages

1 Select MENU.

2 Select »USER PAGES« with o + or s – and press OK.
A table of the stored preferred pages will be displayed.
(See Fig. 47.)

3 Select the desired page with o + o s – and press OK.
The page will be displayed after some seconds.

or

You can use the coloured buttons on the Remote Commander to have quick access to the first four User pages. Page 1 corresponds to the red button, P 2 to the green one, P 3 to the yellow one and P 4 to the blue button.
To select the desired page press the respective coloured button while you are in TV mode. Now the Page number of this teletext page will appear in white at the top in the left-handed corner of the TV screen. When the page number changes colour the page is available. Press the coloured button again to display the page.

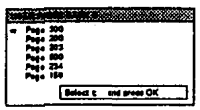
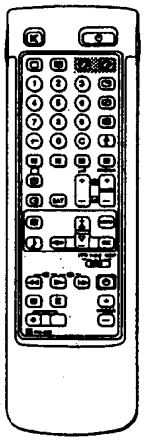
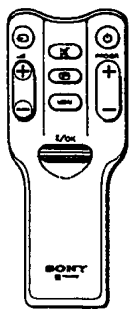


Fig. 47.

Operating Optional Equipment

Selecting input with PROGR +/- or number buttons
You can preset video input sources to the programme positions so that you can select them with PROGR +/– or number buttons. For details, see »Preset channels manually« on page 8.





Selecting input and output

This section explains how to view the video input picture (of the video source connected to your TV), and how to select the output signal using direct access buttons or the menu system.

Selecting input

Press z repeatedly to select the input source.
The symbol of the selected input source will appear.

z 1

To go back to the normal TV picture

Press x .

Input modes

Symbol	Input signal
z 1	Audio/video input through the e 1 connector
1	RGB input through the e 1 connector
z 2	Audio/video input through the A 2/y 2 connector
y 2	S video input through the A 2/y 2 or y 2 connector
z 3	Audio/video input through z 3 and p on the front
y 3	S video input through the y 3 connectors on the front (4-pin connector)
z 4	Audio/video input through the A 4/y 4 connector
y 4	S video input through the A 4/y 4 or y 4 connector (4-pin connector)

You can also select the input mode using the P→1 →z and –/+ buttons on the TV.

In this case, first select z , and then press –/+ buttons to select the input.

Selecting the output

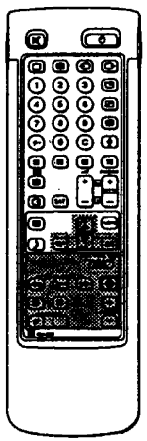
The A 2/y 2 connector outputs the source input from the other connectors.

Press h repeatedly to select the output.
The symbol of the selected output source appears.

1 h

Output modes

Symbol	A 2/y 2 connector outputs
1 h	The audio/video signal from the e 1 connector
2 h	The audio/video signal from the A 2/y 2 connector
2 a	The audio/S video signal from the A 2/y connector
3 h	The audio/video signal from the z 3 and p 3 connectors
3 a	The audio/S video signal from the y 3 and p 3 connectors
4 h	The audio/video signal from the A 4/y 4 connector
4 a	The audio/S video signal from the A 4/y 4 connector
TV h	The audio/video signal from the E aerial terminal



When recording
When you use the ● (record) button, make sure to press this button and the one to the right of it simultaneously.

Checking and selecting the input and output sources using the menu

You can display the menu to see which input sources are selected for the TV screen and PIP screen, and which output source is selected. You can also select them on the menu display.

1 Select »Video Connection« with o + or s – and press OK. The VIDEO CONNECTION menu appears. (See Fig. 48).
You can see which source is selected for the TV and PIP input, and for the output. If you want to select the input and output on this menu, go on to the next step.

2 Select TV screen (input source for the TV screen), PIP (input source for the PIP screen), or Output (output source) with o + or s – and press OK. One of the source items changes colour. (See Fig. 49.)

3 Select the desired source with o + o s –. (See Fig. 50.)
For details about each source, see the table on page 23.

4 Press OK.
The selected source is confirmed, and the cursor appears. (See Fig. 51.)

5 Repeat steps 2 to 4 to select the source for other inputs or outputs.

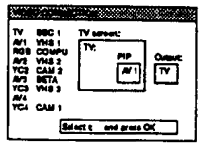


Fig. 48

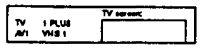


Fig. 49

Fig. 50

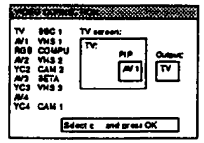


Fig. 51

Remote Control of Other Sony Equipment

You can use the TV Remote Commander to control other remote-controlled equipment. The buttons for video operation have been factory-set to control most of Sony video equipment, such as: Beta, 8mm or VHS VTRs or video disc players.

Tuning the Remote Commander to Sony equipment

1 Set the VTR 1/2/3 MDP selector according to the equipment you want to control:
VTR 1: Beta or ED Beta VTR
VTR 2: 8mm VTR
VTR 3: VHS VTR
MDP: Video disc player

2 Use the buttons indicated in the illustration to operate the additional equipment.
If your video equipment is furnished with a COMMAND MODE selector set this selector to the same position as the VTR 1/2/3 MDP selector on the TV Remote Commander.
If the equipment does not have a certain function, the corresponding button on the Remote Commander will not operate.